19980423.ba v02_n025.bam.980423 v02_n026.bam.980423

>From ???@??? Thu Apr 23 11:45:34 1998
Message-Id: <199804231358.IAA23686@sco.theporch.com>
Date: Thu, 23 Apr 1998 08:57:44 CDT
Subject: BOATANCHORS digest 2025

BOATANCHORS Digest 2025

Topics covered in this issue include:

 1) Lkg for Blue Racer Bug
 by Mike <ac5p@ionet.net>
 2) Re: "Black Beauty" Caps
 by "Bob Duckworth" <wb4mnf@atl.org>
 3) 6 METER CONVTER
 by "Jerry" <jlee@ncia.com>
 4) New NSS Transmitter tour webpage
 by Jeffrey Herman <jeffreyh@hawaii.edu>
 5) R390as Manuals
 by Matt Parkinson <mattradi@earthlink.net>
 6) Grounding, shielding, and safety.
 by "Barry L. Ornitz" <ornitz@dpnet.net>
 7) Carbons Resistors
 by Matt Parkinson <mattradi@earthlink.net>
 8) REPRO KNOBS -YOUR THOUGHTS PSE
 by Mike Souhrada <wb9iog@revealed.net>
 9) power lines / chassis grounds (I started it)
 by "Larry Johnson" <k5yf@wt.net>
 10) Re: Geeez! Don't kill yerself!
 by Henry van Cleef <vancleef@netcom.com>
 11) Re: power lines / chassis grounds (I started it)
 by Sandy W5TVW <ebjr@worldnet.att.net>
 12) Need info on P & B latching relay
 by David Ross <ross@hypertools.com>
 13) Geeez! Don't put yer foot in yer mouth, Don!
 by "Don L. Davis" <dxguy@earthlink.net>
 14) grounding
 by Jeffrey Herman <jeffreyh@hawaii.edu>
 15) Re: 6 METER CONVTER
 by Bill Jarvis <B.H.Jarvis@hw.ac.uk>
 16) Re: grounding
 by "Arden Allen" <gumbear@pacbell.net>
 17) Re: grounding
 by Bill Jarvis <B.H.Jarvis@hw.ac.uk>
 18) HELP ID EDDYSTONE RECEIVER
 by "Steve Hill" <SHILL@onaustralia.com.au>
 19) Racal RA-117 progress - III

 by "JOSE V.GAVILA (EB5AGV/EC5AAU)" <eb5agv@ctv.es>
 20) Getting ZAPPED!!!
 by daniel wright <djw@unlinfo.unl.edu>
 21) Re: Carbons Resistors
 by "Lawrence R. Ware" <lrware@pipeline.com>
 22) Re: Getting ZAPPED!!!
 by Bob Roehrig <broehrig@admin.aurora.edu>
 23) Re: Need manuals and info on General Radio 650-A Impedance meter
 by "Owens, Clarence" <owensc@nebeng.otis.com>

Date: Wed, 22 Apr 1998 21:00:11 -0500 (CDT)
Message-Id: <199804230200.VAA18466@mail.ionet.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
To: Old Tube Radios <boatanchors@theporch.com>
From: Mike <ac5p@ionet.net>
Subject: Lkg for Blue Racer Bug
Cc: boatanchors@theporch.com

Would anyone on the list perchance have one of these Vibroplex bugs collecting dust on their closet shelf? It has a narrower base than the standard model. I've got a nice Deluxe chrome model for trading stock.
Mike ac5p, Bartlesville, OK

Message-Id: <199804230139.VAA03904@atl.org>
From: "Bob Duckworth" <wb4mnf@atl.org>
To: Old Tube Radios <boatanchors@theporch.com>
Cc: <boatanchors@theporch.com>
Subject: Re: "Black Beauty" Caps
Date: Wed, 22 Apr 1998 22:53:30 +0100

All I look for is caps with big cracks in them and covered with oil. Can't see those little bands anyway. Too much UV exposure...
These have a problem for sure. Haven't had to replace any that weren't physically leaking. Almost all the cracked ones I've seen are of the larger (approx 1/2" and + diameter). PP calls 'em Martian O'rderves
There kinda like wives, you know when you've got 'em.
-bob

| From: Stan Griffiths <w7ni@teleport.com>

| >What are the identifying characteristics of these caps? Everything I've read
| >seems to indicate an almost 100% failure rate by now. | >73, Ray W2EC

|
| The black beauty caps that cause a lot of trouble in Tek scopes are axial
| lead black caps with several colored bands on them.

| Stan w7ni@teleport.com
|

Message-ID: <006b01bd6e5e$e33192e0$635360cc@jlee>
From: "Jerry" <jlee@ncia.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: 6 METER CONVTER
Date: Wed, 22 Apr 1998 19:24:03 -0700
MIME-Version: 1.0
Content-Type: multipart/alternative;
 boundary="----=_NextPart_000_0068_01BD6E24.35CF54A0"

This is a multi-part message in MIME format.

------=_NextPart_000_0068_01BD6E24.35CF54A0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable

Does anyone on the list know where I might find an 6 meter converter?

thanks
Jerry=20

------=_NextPart_000_0068_01BD6E24.35CF54A0
Content-Type: text/html;
 charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable

<!DOCTYPE HTML PUBLIC "-//W3C//DTD W3 HTML//EN">
<HTML>
<HEAD>

<META content=3Dtext/html;charset=3Diso-8859-1 =
http-equiv=3DContent-Type>
<META content=3D'"MSHTML 4.72.2106.6"' name=3DGENERATOR>
</HEAD>
<BODY bgColor=3D#ffffff>
<DIV>Does anyone on the list know where I =
might find=20
an 6 meter converter?</DIV>
<DIV> </DIV>
<DIV>thanks</DIV>

<DIV>Jerry </DIV></BODY></HTML>

------=_NextPart_000_0068_01BD6E24.35CF54A0--

From: Jeffrey Herman <jeffreyh@hawaii.edu>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: New NSS Transmitter tour webpage
Message-Id: <98Apr22.164236hwt.188969(2)@uhunix5.its.Hawaii.Edu>
Date: Wed, 22 Apr 1998 16:42:33 -1000

Just visited this web site - wonderful!!!

>On April 18, I visited the NSS Naval Radio Transmitter site in
>Annapolis, MD which recently ceased operation. Many other hams and radio
>enthusiasts from all over the country were there.
>I have created a webpage showing 22 pictures from the tour and
>information derived from presentations given by former engineers of the
≥site. The transmitter input power was 1 million watts at a frequency of
>about 20 HZ to communicate with ships and submarines. The URL is:
>http://www.exit109.com/~jimh/nss.shtml
>Enjoy,
>73,
>Jim Hawkins - WA2WHV

Jeff KH2PZ

Message-ID: <353EB057.91A74F5A@earthlink.net>
Date: Wed, 22 Apr 1998 20:07:03 -0700
From: Matt Parkinson <mattradi@earthlink.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: R390as Manuals
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

I bought some R390as manuals from this post I think and dummu here lost
the address for the person I purchased them from does anyone remember
this posting or better yet maybe the owner of these manuals will contact
me thanks Matt Parkinson KE6OUS they were for the years of 1953 or
58 I have lost my mind look for this posting Thanks

From: "Barry L. Ornitz" <ornitz@dpnet.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Grounding, shielding, and safety.
Date: Wed, 22 Apr 1998 23:09:30 -0400

Message-ID: <01bd6e65$3b3c4600$4c199cce@ornitz.tricon.net>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

With all the discussion recently about grounding versus shielding and the trade-offs with electrical safety, I would like to recommend a book on this subject. While rather expensive, I can say it is worth the money, especially if you ever have to use strain gages around 500 hp motors as I once did (microvolts of DC riding on many volts of AC). While the audio crowd brags about their golden ears and such, the shielding requirements for audio are pretty trivial compared to many industrial instrumentation applications.

The book is:

Author: Morrison, Ralph.
Title: Grounding and Shielding Techniques in Instrumentation
Published: New York : Wiley, 1998.
LC Call No.: TK7878.4.M66 1998

The original edition of this book was published in 1967. Later editions were printed in 1977 and 1986. The book is about 200 pages and it is available in paperback. The publishers flysheet says:

 "A highly practical approach to solving noise control problems in electronic
 systems. Provides basics on handling noise problems, on building
 instrumentation systems, and on interconnecting systems. Reviews physics of
 electrostatics, then covers active elements, amplifiers, signal
 conditioning, isolation transformers, and more. Includes an enlarged
 treatment of RF processes. Features figures and drawings. Revised,
 expanded, and updated from the successful 1967 edition."

In restoring Boatanchors, I believe in ALWAYS using a grounded 3-wire electrical cord. Safety is more important than authenticity. If you have a museum piece, use an identical 2-wire cord - but remember the unit should then be locked up in the museum and never operated again! Also, those old twin-fuse plugs should all be relegated to the trash bin since they are accidents waiting to happen.

 Barry L. Ornitz WA4VZQ ornitz@dpnet.net

Message-ID: <353EB6E8.C6F67047@earthlink.net>
Date: Wed, 22 Apr 1998 20:35:05 -0700

From: Matt Parkinson <mattradi@earthlink.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Carbons Resistors
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

I am looking for a good source to buy carbons resistor> Iam restoring several R390as and the IF decks have many burnt resistors in them. Anyone have a good source for these puppies.I need 1 watt and 1/2 resistors.I like to buy them cheap if that is possible thanks Matt Parkinson KE6OUS 73s

Message-ID: <353EB9EA.6ED7@revealed.net>
Date: Wed, 22 Apr 1998 22:47:54 -0500
From: Mike Souhrada <wb9iog@revealed.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: REPRO KNOBS -YOUR THOUGHTS PSE
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Gang Here Goes The Next Project:
Spent some cash today!;
for documentation re casting and molding.

For some years now I've run into the same darn problem ___KNOBS!
The right ones. I've restored about 3 of the SX 71's and many others. Some had
those nasty fluted ones with the metal insert missing, and some were cracked or broken.
Did you ever find one of those big grey National knobs with the chrome insert?? I've never-never seen one in a knob box at all the hamfests I've been to in 25+ years. I LOOK.
For some reason when I finish a restoration it's not really satisfying unless the knobs are correct. Mabe I'm too fussy??

So I decided to bite the bullet and see what can be done with reproduction knobs.
Likely will start with the SX , or S 38 type,and certainly those pesky little lever knobs for the Heath line. Thats the one that always breaks the tab off-you know the one?
In addition I've seen so many posts for those S 38 knobs that my delete key
is getting flakey. Been wanting a cheap S 40B myself, to put on the shelf as it's
a nostalgia thing with me from the '50's; but almost everyone I've seen

has the wrong or wornout variable tweakers.

Would like the group thoughts on this project.
Is it worth the time & effort to pursue?

How important is color match or can you/would you paint it yourself?
(Dyes for epoxy ,polyester or whatever would likely be hard to match.)
(Black is easy)

Which knobs are the hardest to find?

Which ones would satisfy the greatest need??

Anyone with a lathe able to sub contract inserts? Or should
I buy new (cheap) knobs and bust out the insert?
(I even thought of purchasing a small metal lathe to make those)
(Need to be knurled to retain)

Any other wild ideas would be appreciated. Including some target prices.

This may be a toughie project but I'm game.

Mike
Le Claire, Ia

Purveyor of HQ clock lenses-a fun project that turned out 10 times
better
than expected, and I learned something too.

From: "Larry Johnson" <k5yf@wt.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: power lines / chassis grounds (I started it)
Date: Thu, 23 Apr 1998 04:05:50 -0000
Message-ID: <01bd6e6d$1a102c00$4115ecd0@k5yf>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Boy, I didn't know what I was starting when I sent that note...<g> But, like
I said, better stupid and alive than dumb and dead (although I really hate
being stupid)... First, thanks to everyone for their answers. Good answers
(and a good explanation of isolation transformers...thanks Bobbi). And...I
see where I was going wrong in my thinking.

Can't offer any real excuses except I just wasn't thinking straight
and...I've been looking at too many radios lately with floating grounds (and

somewhere kept thinking floating grounds).

Secondly...and the way I learned about floating grounds...was I had a really nasty experience when I restored my Hickok 209A VTVM...and in my infinite wisdom, I added a 3 wire cord...grounding the chassis.....in turn grounding the ground lead to real ground and went poking around in an old radio that had a floating ground. And admittedly, somewhere in all of that, I hooked up a radio that had a leaky cap and messed up wiring...and didn't use the variac...went to hook anantenna to it...got a surprise there as soon as I touched the coax connector and the radio.

Thirdly, I was looking at the schematics of several old BAs, plus a '55 and '61 handbook, and kept thinking...ok...input ac goes to the transformer, metal chassis is ground on the other side of the transformer...duh...

Anyway, I understand the error of my thinking and where I was going wrong. I've learned a lot in the short time I've been into BAs, but still have a lot to learn. Fortunately, in spite of some mistakes either due to ignorance or stupidity, I'm still around to keep learning, and would like to keep it that way for a while. Again, thanks to all for their responses and help.

Larry Johnson, K5YF
Houston, Texas USA
e-mail: k5yf@wt.net

From: Henry van Cleef <vancleef@netcom.com>
Message-Id: <199804230406.VAA01389@netcom8.netcom.com>
Subject: Re: Geeez! Don't kill yerself!
To: Old Tube Radios <boatanchors@theporch.com>
Date: Wed, 22 Apr 1998 22:06:50 -0600 (MDT)
Cc: boatanchors@theporch.com
MIME-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit

As Don L. Davis discourses
>
> I was shocked (no pun intended, much) to read Larry's querry re: ground
> wires and Scott's shockingly dangerous reply.
>
Well, I'm going to quote more of this than I really ought to, because
I am going to disagree with you rather sharply, beginning with your
categorization of what Scott (who has many many years of experience as
a working stiff EE with the type of equipment he is talking about" as
"shocking" or "dangerous."
>
> ALWAYS ALWAYS ALWAYS (excuse me for shouting) use a 3 wire ground plug

> on each and every piece of equipment you own. I don't know what audio
> engineering is (or is not) but I'm a real-life MSEE (Master's in
> Electrical Engineering with emphasis in power conversion from a major
> university), and do "power" for a living (for the past 30 years anyhow -
> so, I'm a relative newcomer). I've fired a lab tech for doing what
> Scott suggests. There is never a good excuse to defeat the 3 wire
> ground. If you have hum or noise or problems or difficulty measuring
> microvolts of signal, then you need better, differential, safe
> equipment. Also, lab or shack equipment should not (as a rule) be
> connected through other pieces of equipment. Get a good, approved,
> breaker strip to extend the number of outlets & check all outlets
> periodically with the proper tester. Also, GFCI is good insurance. It
> will also convince you that you really DO need to change those leaky
> caps in the old BA (due to GFCI trips).

Naww---not really. First of all, we're not talking about "power" here, but about small electronic equipment, much of which draws less than 0.1KVA. Secondly, we are talking about equipment that was designed in built long before the NEMA-15 receptacle, or integral grounds in 120VAC distribution wiring were even dreamed of. Some of that equipment paid very good attention to grounding design, and it is not compatible with the 3-wire U-ground setup at all. Indeed, you can get some smoke if you don't pay attention and just hook up a 3-wire cord.

So far as fancy degrees from good universities, a while back, I suggested to someone that they not try to impress us with their graduate degrees----we've got a supply of our own. Since I've done the "perfesser" act, I'll point out that the average college professor has never had to do the engineering work needed to put a design into production and get it to work at customer sites. "Never trust a Ph.D. with a soldering iron."

Since I've gone out as "Dr. Grounds" on more than a few occasions, to solve grounding problems in small-signal/high power mixed environments, I can give you an airtight guarantee that just using the power distribution ground wiring and 3-wire U-ground setups sometimes just is not the thing to do. Generally, the client already tried it, and that's why I got a telephone call and an opportunity to make some money. There are reasons why home entertainment stuff uses 2-wire power distribution today, and does not attempt to do grounding through the power distribution system.

So far as ground fault detectors (I do not know what the letters "GFCI" stand for, although know what the devices are and how they operate), you should understand that these devices are incompatible with some of the RFI-prevention practices used 30 years ago with 3-wire U-ground equipment. I have a 1964 HP-412A voltmeter that is

guaranteed to trip one of these gizzies every time, and the caps in it don't leak at all.

And no, I'm not going to toss my Tek 533A scope and the six or eight plug-ins I use with it, most of which are single-ended setups, and buy some new-fangled differential device to replace it. I pay attention to bench grounding. I've been doing it since 1944, and while the introduction of the 3-wire setup in the late fifties solved some problems, it created a bunch of others, not the least of which is that you can't float your bench without using an isolation transformer.

Good grounding practice on single-ended circuitry (and virtually everything we talk about here is single ended) generally is much more controlled by interconnections between equipments operating as a system than anything else. In essence, you want to "guard" the low side with a common signal that appears at all the equipments in a very short time (low nanoseconds at most) difference between boxes. Six inches or a foot of wire will do this. If you try to use the power distribution system, you are confronted with:

a. The electrical length of the grounds can quickly become significant if the same ground run is not used for all receptacles. Following the NEC, if the box is 50 feet away, and you are running equipments from two different circuits, you've got 100 feet of ground wiring (plus any length to the box earth ground, which may or may not be a good ground). Since electricity travels at about 10 inches a nanosecond up and down typical wiring, you've got 120 nsec electrical length.

b. Romex and most other paired wiring has a characteristic impedance between the conductors around 120 ohms, with maybe +/-20% error (zip cord and twisted pair hookup wire are about the same). Given that in most Romex the ground is roughly equidistant from the two conductor wires, you are looking at 60 ohms characteristic impedance, with one wire wiggling up and down at 120 volts, the other with no voltage gradient. Plenty of opportunity to pick up 60 volts in a 50-foot run, particularly if (as in most audio and instrumentation circuits) the input impedances are orders of magnitude higher. You think a good working AA5 radio can hum, you can get some REAL hum out of the wall---from the supposed "safety" ground. Maybe you can handle the picoamps, but your equipment can't.

c. Condition of the wiring has to be considered. Was it wired properly in the first place (a lot of it wasn't). What's the current condition?

I most certainly would not want to be the one to attempt to tell Bobbi Barmore that she MUST ALWAYS connect with three wires to the power distribution in her TV station. You can figure what fields might be floating around on channel 13 in the same building with a 50KW transmitter. She's lucky to get 120VAC through the power wiring in

that building, and getting rid of noise requires some smarts and experimenting. Power distribution wiring (whether 120, 120/208, 240, 460, or 480 volts) may have some ground wires in it, but they sure are not small signal grounds. You can quibble 3-phase delta, 3-phase star, or 3-phase star-delta with five wires in the distribution, but I can tell you (I've worked with all of them) that the ground may swallow what comes off an electric motor frame, but it will drive small signal stuff nuts. Good grounding is what works with the equipment first---safety considerations come afterward.

Nobody should be lulled into believing that vacuum tube electronics are "safe." There is a small matter of B+, which generally is 100 to 1000 volts, with the ability to deliver an amp or more "continuously" long enough to assure you are quite fried if you get across it---to say nothing of the joules available from filter caps for enough milliseconds to start the job. We talk here from time to time about the one-hand-in-the-pocket method, grounding sticks, and so forth and so on. This equipment is "BN" (before Nader). Some of us also dabble with modern stuff that says "no user serviceable components inside." We open it up and get it working again.

> Re: Giving advice to others on the Internet: I wonder how one would
> feel if a friend or acquaintence (or even a stranger) took one's advice
> & wound up killing himself due to an unsafe set-up? I wonder if the
> family could come back & sue the person giving such advice? Also
> ponder: a supervisor in my field (in CA anyhow) who knowingly allows a
> subordinate to work on an unsafe set-up is guilty of a crime if the
> person is injured or killed. Just wondering.
>
It's all caveat emptor around here. Where I work, I pay attention to the practices going on, where I can see them and audit what people are doing. All I can say is "pay attention to what you are doing" and talk about watching out for the high voltage and about using grounding sticks. At work, I can walk arount with a Simpson meter and see if there are volts floating around. On this mail list, I can't do that.

I sometimes wonder what a steam locomotive would look like after OSHA got through with it. But that's off-topic for this group. The only thing we can do here is tell people to learn and observe safe practices, and to check everything.

--
==========
Hank van Cleef
==========

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"
To: Old Tube Radios <boatanchors@theporch.com>
From: Sandy W5TVW <ebjr@worldnet.att.net>
Subject: Re: power lines / chassis grounds (I started it)
Date: Thu, 23 Apr 1998 05:46:25 +0000
Message-ID: <19980423054623.AAA14326@LOCALNAME>

At 04:05 AM 4/23/98 -0000, you wrote:

>Secondly...and the way I learned about floating grounds...was I had a really
>nasty experience when I restored my Hickok 209A VTVM...and in my infinite
>wisdom, I added a 3 wire cord...grounding the chassis.....in turn grounding
>the ground lead to real ground and went poking around in an old radio that
>had a floating ground. And admittedly, somewhere in all of that, I hooked up
>a radio that had a leaky cap and messed up wiring...and didn't use the
>variac...went to hook anantenna to it...got a surprise there as soon as I
>touched the coax connector and the radio.

Like it or not, when one fools with a Boatanchor" (large or small) the *BEST* thing to do is use an isolation transformer between the AC line and the equipment under test (EUT).

Doing this relieves you of the dangerous shock hazard *and* what I like to call the "spitzen sparken syndrome" when a grounded piece of test gear is connected to:

1.) An "AC-DC" LIVE chassis radio.

2.) A transformer operated receiver with old shorted paper bypasses from each side of the power line to the chassis.

Then it doesn't matter about 2 wire plug polarity, how you hook up your "suicide cable", (A two wire cable terminated in alligator clips on one end and a two wire AC plug on the other end! Dangerous, but sometimes VERY useful!)

I hasten to add that a "variac" or adjustable tranformer is *NOT* an isolation device, it is simply an autotransformer! RCA made a very nice isolation transformer called the Isotap. These show up rarely at hamfests. I have a big 1-2 KW job that I bought at a fest for $10. It will handle practically everything you could plug into it except a Collins KW-1 or a Johnson "Desk". I also use a small 100 watt one, especially when I'm working on the typical "All American Five" Acey-Ducey receiver.

I also use a step-up autotransformer for 220-230 volt European gear I occasionally work on, or to power my old fashioned 220 volt soldering irons. To prevent confusion, All the 220 volt stuff is using standard 2 pin European type round plugs with the grounding contacts on the side. I find them much easier to use than the twist lock or 3 pin American 220 volt plugs, and better as well. This way you can't mistake a 220 volt outlet for a 110 volt one! I bought mine from some local electrical suppliers. Whether they meet "code" or not, I don't know, but they work very well. Millions of Europeans can't be wrong, as just avbout every country there

has standardized on them except the UK, where the 13 amp plug is "standard"
(The one with the big square pins!)
73,
E. V. Sandy Blaize, W5TVW
"Boat Anchors collected, restored, repaired, traded and used!"
417 Ridgewood Drive
Metairie, LA., 70001

Again looking for a Hallicrafters SR-75 *
860 Hartley 'ECO' construction "on hold"**
*** Looking for a TRC-10 transceiver ******
*** Looking for an RAL receiver ***********

Message-Id: <3.0.5.32.19980422225333.007b0c50@mail.willapabay.org>
Date: Wed, 22 Apr 1998 22:53:33 -0700
To: Old Tube Radios <boatanchors@theporch.com>
From: David Ross <ross@hypertools.com>
Subject: Need info on P & B latching relay
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

BAfolks -

 I'm working on a radio here with a mystery relay in it. The relay carries Potter & Brumfield number TL4023 and is labelled "ENERGILAST" or maybe "ENERGYLAST". The radio's parts list calls it a "LATCHING RELAY" and gives it a Collins part number of 044-6818-00.

 According to the schematic, it is a 4PDT unit with two coils.

 Does anyone have a data sheet on this P & B TL4023 relay? The radio is of early '60s vintage.

73 and thanks in advance
Dave Ross KA6EPI ross@hypertools.com

Message-ID: <353EEC8A.3DC8@earthlink.net>
Date: Wed, 22 Apr 1998 23:24:26 -0800
From: "Don L. Davis" <dxguy@earthlink.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Geeez! Don't put yer foot in yer mouth, Don!
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

I want to apologize to Scott Robinson for disparaging remarks re: his

credentials. Unwarranted, and un-BA-like behavior on my part. Sorry.

Interesting to read some of the other comments on this (equipment grounds, that is). My technical points persist, however. I have not read one good reason to "float" a piece of equipment. It may take re-wiring of the facility, re-wiring the apparatus under test, good isolation transformers everywhere, or expensive (non-BA type, new) equipment to get the job done. But, the job can always be done right, and safely.

73s Don Davis DXGUY@earthlink.net

Date: Wed, 22 Apr 1998 20:29:57 -1000
From: Jeffrey Herman <jeffreyh@hawaii.edu>
To: Old Tube Radios <boatanchors@theporch.com>
cc: Old Tube Radios <boatanchors@theporch.com>
Subject: grounding
Message-ID: <Pine.GSO.3.95q.980422202736.12376B-100000@uhunix5>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

We've drifted a bit, but let me quickly ask: Where does
UL leave off and NEC begin?
KH2PZ

Message-Id: <199804230730.IAA27329@punt2.hw.ac.uk>
To: Old Tube Radios <boatanchors@theporch.com>
From: Bill Jarvis <B.H.Jarvis@hw.ac.uk>
CC: boatanchors <boatanchors@theporch.com>
Date: Thr, 23 Apr 1998 09:30:44 +2200
Subject: Re: 6 METER CONVTER

The policy of sending your message twice, once in some lengthy form of code which flashes past and cannot be stopped, means that some of us can't read your message at all.

========== ===== ===== BILL J. ===== ===== ==========
GM8APX, qthr EDINBURGH, SCOTLAND, UK

Naturam expellas furca, tamen usque recurret

Net-Tamer V 1.10 - Registered

Message-Id: <199804230905.CAA13634@mail-gw3.pacbell.net>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: grounding
Date: Thu, 23 Apr 1998 02:06:41 -0700
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Jeff asks:

> We've drifted a bit, but let me quickly ask: Where does
> UL leave off and NEC begin?

A simple question deserves a simple answer. UL sets standards for consumer goods and the like. NEC is used by municipalities to create local building codes and manufacturers follow NEC so their stuff will be accepted by the local bribe taker. As there are now BILLIONS of standards organizations keeping PHD's (Poor Helpless Dears) off of the breadlines, today's products are the offspring of humanities' propensity to correct all ills in the universe by pointing out that what the other guy is doing is bad.

Arden Allen KB6NAX Vallejo, CA gumbear@pacbell.net

Message-Id: <199804230955.KAA29388@punt2.hw.ac.uk>
To: Old Tube Radios <boatanchors@theporch.com>
From: Bill Jarvis <B.H.Jarvis@hw.ac.uk>
CC: boatanchors <boatanchors@theporch.com>
Date: Thr, 23 Apr 1998 11:55:28 +2200
Subject: Re: grounding

On 1998-04-23 gumbear@pacbell.net said:
 ..Status:
 ..Jeff asks:
 ..> We've drifted a bit, but let me quickly ask: Where does
 ..> UL leave off and NEC begin?
 ..A simple question deserves a simple answer. UL sets standards for
 ..consumer goods and the like. NEC is used by municipalities to
 ..create local building codes and manufacturers follow NEC so their
 ..stuff will be accepted by the local bribe taker. As there are now
 ..BILLIONS of standards organizations keeping PHD's (Poor Helpless
 ..Dears) off of the breadlines, today's products are the offspring of
 ..humanities' propensity to correct all ills in the universe by
 ..pointing out that what the other guy is doing is bad. Arden Allen
 ..KB6NAX Vallejo, CA gumbear@pacbell.net

True, very true. In the new Wet Britannia, the daily whinge programme on

BBC Radio 4 has been extended to nearly an hour, it's such a success in harrassing struggling and well-intentioned small businessmen who make easily-correctable mistakes.

============ ===== ===== BILL J. ===== ===== ============
GM8APX, qthr EDINBURGH, SCOTLAND, UK

Mores puerorum se inter ludendum detegunt

Net-Tamer V 1.10 - Registered

From: "Steve Hill" <SHILL@onaustralia.com.au>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: HELP ID EDDYSTONE RECEIVER
Date: Thu, 23 Apr 1998 20:33:59 +1000
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit
Message-Id: <10385473266494@onaustralia.com.au>

Gang,

A couple of weeks ago I asked about an Eddystone receiver
I aquired. I received no clues as to its identity.

BUT... There is now a picture of it on my web page.
Go to <http://www.users.bigpond.com/SHILL> and
look at the last picture.

PLEASE TELL ME WHAT THIS THING IS.

Cheers
--
Steve Hill VK4CZT
<SHILL@onaustralia.com.au>
check out my military radio page at:
<http://www.users.bigpond.com/SHILL>
39 Banbury St.
Carina. 4152.
Brisbane. Australia.

Message-Id: <3.0.1.32.19980423141442.006c9628@192.168.0.1>

Date: Thu, 23 Apr 1998 14:14:42 +0200
To: Old Tube Radios <boatanchors@theporch.com>
From: "JOSE V.GAVILA (EB5AGV/EC5AAU)" <eb5agv@ctv.es>
Subject: Racal RA-117 progress - III
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi gang,

Today I'm a bit less happy than yesterday... My RA-117 is NOT as hot receiver as I thought from my first checkings :-(... It needs of some alignment, repair or both. Let me explain all of this: when I checked its performance against the Collins 75S-3B, I did something wrong with the 75S-3B and, as Murphy is always hidden in the shack, the resulting performance was very similar for both receivers. I think I had a bad contact in the Collins antenna. Once fixed, the Collins is, by far, better than the Racal at its present condition. I used also a SS receiver to verify that now the 75S-3B was working fine.

So yesterday I began to work a bit on the Racal and found a possible culprit: at TP3, with V9 removed, I get only about 1.2Vpp in Mc/s position 0 and lots less in any other position. My manual claims for 2Vpp at any Mc/s position!. I changed V10, V8, V6, V4 and V2 with no appreciable difference. TP3 is the output of the 40Mc/s bandpass filter. I know it is not easy to align so I hope the failure is not the filter alignment itself but other component. I'll look at the signal flow up to this point, to find where it gets lost...

Another 'bad' new is that my receiver is NOT a RA-117A as I suspected, because it has the small V24 diode tube/valve in the IF strip. It is a bit hidden, but it is there. So what I have is a late (1971 vintage) RA-117. Perhaps this is not so bad, as Chris Parry commented yesterday: "I have an RA117A, which drifts (I understand this is typical of this particular variant)".

Well, now I need some help from you, experienced Racal restorers, about where to look at for such a weak TP3 signal... Let's start the game ;-)!

Thanks and best regards.

JOSE

 73 EB5AGV / EC5AAU
 JOSE V. GAVILA
 Ausias March 46, 15
 46910 Benetusser - VALENCIA
 SPAIN

** VISIT MY VINTAGE RADIO SITE - updated 7-Apr-1998 ***
 http://www.geocities.com/SiliconValley/6992/
 e-mail: eb5agv@ctv.es & eb5agv@amsat.org

Date: Thu, 23 Apr 1998 07:34:05 -0500 (CDT)
Message-Id: <199804231234.HAA08667@unlinfo.unl.edu>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
To: Old Tube Radios <boatanchors@theporch.com>
From: daniel wright <djw@unlinfo.unl.edu>
Subject: Getting ZAPPED!!!

Hiya'll...(;->

Ahhhhh.....springtime in Nebrasky...ahem...err...anyhoo...

With all this talk of grounds and safety and electical stuff,
I have a question. Probably trivial to all you experts on the
list,but here goes anyhoo:

I have a bunch of different rigs hooked up with a common switch
to determine which "setup" (rcvr/xmtr pair or transceiver) goes
to the tuner. Some pairs are switched with relays and some pairs
are switched with electronic TR switches.....

Whenever I connect and disconnect the antenna coax whilst changing
or replacing rigs,it get "bitten". The shock is not great,but it sure
is annoying! What's up with this? Is it leaky caps? Do I need to
try reversing all the two prong plugs on all the gear until I don't
get zapped? Please don't tell me I need isolation xfmrs on all the
gear..(8-/!! I suppose the solution would be to replace ALL the power
cords with three-prong grounded ones? Speakin' of which....what's
the procedure for replacing two prong with three prong cords?
Hot to hot....neutral to neutral..ground to chassis? Are there
ever any instances when the "neutral" was originally tied to chassis?
What to do then?

I know....I know....questions,questions...(;0

Thanks a bunch...take care all es

73 de Dan -- WA0JRD ..
WPE0DEN
djw@unlinfo.unl.edu
Lincoln,Nebraska

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------------------------------
Message-Id: <3.0.5.32.19980423074827.00830560@pop.pipeline.com>
Date: Thu, 23 Apr 1998 07:48:27 +0000
To: Old Tube Radios <boatanchors@theporch.com>
From: "Lawrence R. Ware" <lrware@pipeline.com>
Subject: Re: Carbons Resistors
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

At 20:35 04/22/1998 -0700, Matt Parkinson wrote:
>I  am looking for a good source to buy carbons resistor
<snip>
>Anyone have a good source for these puppies.I need 1 watt and 1/2

Carbon comp resistors are getting hard to find, I don't think even
AB still makes them. NOS (new old stock) parts are usually out of
spec. now days.
Both Mouser and Digi-key sell metal oxide resistors at good prices.
I use these for almost everything around here with good results.
-Larry



# This message transmitted with 100% recycled electrons.
# Your voltage may vary.
#
# lrware@pipeline.com

------------------------------
Date: Thu, 23 Apr 1998 08:35:38 -0500 (CDT)
From: Bob Roehrig <broehrig@admin.aurora.edu>
To: Old Tube Radios <boatanchors@theporch.com>
cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Getting ZAPPED!!!
Message-ID: <Pine.ULT.3.96.980423083054.23120A-100000@admin.aurora.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Thu, 23 Apr 1998, daniel wright wrote:

> I have a bunch of different rigs hooked up with a common switch
> to determine which "setup" (rcvr/xmtr pair or transceiver) goes
> to the tuner. Some pairs are switched with relays and some pairs
> are switched with electronic TR switches.....
>
> Whenever I connect and disconnect the antenna coax whilst changing
> or replacing rigs,it get "bitten".
```

You have some line voltage leakage somewhere. Some piece of equipment is not grounded that should be - could be one of the electronic TR switches.

The equipment may be tied together and grounded thru the coax shields but that doesn't help when you disconnect the coax. One should not rely on the coax to provide the ground path.

You could put an AC voltmeter between the disconnected coax and ground, then start disconnecting power cords til the leakage goes away to find the offending piece(s) of equipment.

"Nostalgia is a thing of the past"
E-mail broehrig@admin.aurora.edu 73 de Bob, K9EUI
CIS: Data / Telecom Aurora University, Aurora, IL
630-844-4898 Fax 630-844-5530

Content-return: allowed
Date: Thu, 23 Apr 1998 10:04:00 -0400
From: "Owens, Clarence" <owensc@nebeng.otis.com>
Subject: Re: Need manuals and info on General Radio 650-A Impedance meter
To: Old Tube Radios <boatanchors@theporch.com>
Message-id: <0ERVDED2C002UK@mailman.otis.com>

HI,

The last time I saw methanol for sale openly was in Toronto, Canada several years ago. It was the alcohol sold in hardware stores. I suppose it would still be available here in the states at some speed shops (alcohol fuel for drag racing, etc) and possibly at some *Very* large hobby supply places for use in mixing your own model airplane fuel. If you're close enough to the border, Canada might be the most convenient and pleasant way to get some by the gallon (liter!).

As far as touching up the cabinets goes, I'd bet methanol would be a really good stripper for the shellac (My Canadian methanol sure does a great job of removing auto paint, too!!), but you'd really have to use a gentle touch to just reflow the shellac.

Clare Owens N2RJB
owensc@nebeng.otis.com

From: N. West
To: Old Tube Radios
Cc: Old Tube Radios
Subject: Re: Need manuals and info on General Radio 650-A Impedance meter

Date: Wednesday, April 22, 1998 6:36PM

 I haven't located any methanol, just ethanol cut with
methanol. Any thoughts on touching up these GR wooden cabinets?

Fred Powell
c/o
ninaw@u.washington.edu

End of BOATANCHORS Digest 2025

>From ???@??? Fri Apr 24 04:19:32 1998
Message-Id: <199804232312.SAA10540@sco.theporch.com>
Date: Thu, 23 Apr 1998 18:12:04 CDT
Subject: BOATANCHORS digest 2026

 BOATANCHORS Digest 2026

Topics covered in this issue include:

 1) carbon comps
 by ham@raven.cybercomm.net
 2) Grounding comments (long)
 by "Paul Bernhard Sr." <w2tu@email.msn.com>
 3) Re: Geeez! Don't kill yerself! (Bzzzzzt!)
 by Jack Harper <jharper@bs2000.com>
 4) DRAKE R-4* AGC
 by JOHN_SEHRING.parti@ecunet.org (JOHN SEHRING)
 5) POWER LINES / CHASSIS GROUNDS
 by JOHN_SEHRING.parti@ecunet.org (JOHN SEHRING)
 6) Repro Knobs
 by Don <71333.144@compuserve.com>
 7) Re: DRAKE R-4* AGC
 by "David L. Thompson" <thompson@mindspring.com>
 8) AWA DX 'test / twin 69s
 by polepeeg@aa4rm.ba-watch.org (BA Marina Electrician)
 9) Re: Getting ZAPPED!!!
 by Bill Jarvis <B.H.Jarvis@hw.ac.uk>
 10) Interesting Tube Info
 by mack@mails.imed.com (Ray Mack)
 11) Re: Geeez! Don't kill yerself!
 by dma@islandnet.com
 12) Re: REPRO KNOBS -YOUR THOUGHTS PSE
 by dma@islandnet.com

13) Re: Grounding
 by Andre Guibert <aguibert@sympatico.ca>
14) RE: Need manuals and info on General Radio 650-A Impedance meter
 by "Roy S. Morgan" <roy.morgan@nist.gov>
15) Re: REPRO KNOBS -YOUR THOUGHTS PSE
 by Charles Kadesch <chas@digizen.net>
16) B&K T. Tester info FTGH
 by MNHopkins <MNHopkins@aol.com>
17) DRAKE R-4* AGC
 by Ralph Parker <rparker@istar.ca>
18) Re: Carbons Resistors
 by john <johnmb@mindspring.com>
19) Re: Racal RA-117 progress - III
 by "JOSE V. GAVILA (EB5AGV/EC5AAU)" <eb5agv@ctv.es>
20) weird electrical shock and my Elmac af-67
 by gds@digitalexp.com (Reynolds, Jim)
21) GFCI
 by Terry Burge <terrybu@netman.ENS.TEK.COM>
22) Running cathodes cool
 by Bill Jarvis <B.H.Jarvis@hw.ac.uk>
23) R388/51J3 and SanFran
 by Terry Burge <terrybu@netman.ENS.TEK.COM>
24) Power Systems and Personal History
 by Jderm740 <Jderm740@aol.com>

From: ham@raven.cybercomm.net
Message-Id: <1.5.4.32.19980423140023.0087389c@raven.cybercomm.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Thu, 23 Apr 1998 10:00:23 -0400
To: Old Tube Radios <boatanchors@theporch.com>
Subject: carbon comps

Mouser has carbon comps also. Short leads though.
...Dave

Dave Edwards WB2TBB

"It's a dog-eat-dog world . . . and I'm wearing Milkbone underwear."
--Norm Peterson

From: "Paul Bernhard Sr." <w2tu@email.msn.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Grounding comments (long)
Date: Thu, 23 Apr 1998 10:02:20 -0400

Message-ID: <04fb90103141748UPIMSSMTPUSR02@email.msn.com>

Just some replies for the list:

For Bob; - GFCI's are now required by the Code for all kitchen outlets above the counter. It used to be just the ones near the sink but now all must ve GFI'd. (Not grandfathered)

For Jerry; - The code is relatively modern and wasn't always applied . Also as the awareness of the dangers of electricity became evident, new standards were applied and could not be made retroactive. (See you in July)

For Henry; - GFCI = Ground Fault Circuit Interupter

For Jeff - The UL (or Underwriters Laboratory) is the testing and certifying agent for the NFPA (National Fire Protection Agency) which writes the codes (NEC included) for various disciplines, not only electrical. The NEC is only one of the Codes written by the NFPA and sets standards of safety for electrical installations.It by itself is not a legal document but it is incorporated in local codes, OSHA, insurance req., etc..

For Arden; - The UL does not only test equipment for consumer goods but also all electrical equipment from small to large. I guress they could all be called consumers. The UL seal of approval is usually required for parts and equipment used in our intallations.

Thanks for being patient with me - I'm probably to long winded.

Paul W2TU

w2tu@msn.com

Message-Id: <3.0.1.32.19980423082158.006b7a38@teal.csn.net>
Date: Thu, 23 Apr 1998 08:21:58 -0600
To: Old Tube Radios <boatanchors@theporch.com>
From: Jack Harper <jharper@bs2000.com>
Subject: Re: Geeez! Don't kill yerself! (Bzzzzzt!)
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

At 18:17 4/22/98 -0400, you wrote:
>Jack Harper wrote:
>>

<snip>
>> >You may implicitly trust as three wire cord to save your life but I won't.
>> >---
>>
>> I agree -- you can buy a neat little gizmo at your local Radio Shack for a
>> couple of dollars that shows that a three-wire outlet is wired correctly or
>> not. Several LED's tell you if one of the ground terminals is not grounded
>> or the thing is totally incorrect etc.
>>
<snip>>
>It may seem unlikely, but once I used one of those three-light testers
>and all three lights lit. Two green and one red. I got out the Tripplett
>630 and found that the outlet, an outdoor 120V 3-wire one, was wired to
>240 volts! This was at an appliance store with an on-staff electrician.
>The 240 volts had just damaged some remote broadcast gear (the reason I
>was there).
>
>73 de W3NU

As the old saying goes -- "Even paranoids have enemies" (or some such).

A bit of paranoia is sometimes a good thing...

Regards

Jack, W0YJ (Friend to all things Hammarlund)

Jack Harper Bank Systems 2000, Inc.
303-277-1892 Golden, Colorado USA

"21st Century Financial Applications"
Optical Cards for Bank, EBT, and Medical Applications
Visit our Web Page: http://www.bs2000.com/talos (Last Update: 970902)

MIME-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit
Date: Thu, 23 Apr 1998 11:00:59 -0400 (EDT)
Subject: DRAKE R-4* AGC
To: Old Tube Radios <boatanchors@theporch.com>
From: JOHN_SEHRING.parti@ecunet.org (JOHN SEHRING)
Message-ID: <9804231100.aa08430@pcusa01.ecunet.org>

 > The AVC pops a bit on attack, and
 > both releases are too fast, particularly when compared to an R-4.

> This R-4A (ser.# 6268R) appears to be a late model - ss AVC amp and
> 1N270 product detector. The original manual I have is correct for the
> radio. The R-4 sounds a lot smoother, possibly due also to the tube
> product detector. Any other opinions?

You have the R-4B AGC & product detector ct installed in your R4-A!

I have an R-4, -4A & -4B so can easily compare them.

The AGC & PD are same in -4 & -4A.

-4B went to a squalid state version of AGC detector/amplifier. The resemblence is very clear but the tube version worked better, are we surprised?! The -4B does have more AGC voltage to work with, -80 instead of -60 volts, so has more AGC range. The time constants are also somewhat shorter in the slow mode.

The PD is also ss but quite different ct. from prior. It has numerous problems such as BFO leakage into the end of the IF strip which, among other things, modulates the AGC. This problem was addressed in some Ham Radio arts (don't know which ones) & also in R-4C, addressed also by Sherwood mods (see www.sherweng.com)

A ss device is used as AF driver instead of a thermionic emissive device.

The AGC action & audio quality of the -4B is simply not as smooth as the earlier ones.

But, you should not be getting any pops on attack & slow decay ought to be nice & slow. Drake R-4* AGC action is excellent. But it is very high impedance so it takes little to upset it. No change when you removed the extra TC caps is a clue that something is draining the AGC line. Exactly which caps had extra caps added across them?

The rated attack time is 100 microSec, fast decay is 25 mSec, slow is 750 mSec. I think this is an error in the Drake specs as the slow decay components are not the same in the -4B as in the earlier ones even all the other TC components are the same in both tube & ss cts.

I wonder which other -4B circuitry you have in your -4A? The -4B also had a ss 100 kHz xtal cal with 25 kHz markers. All -4B's had the FET PTO rather than bipolar. And Q7 as AF driver. Oh that Drake, they liked to sneak things in, usually good ones, but didn't change model numbers all the time. So if you have a non-original manual with yours, look carefully!

 -John Sehring (written on Thu, Apr 23, 1998 at Custer, SD) UCC WB2EQG

MIME-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit
Date: Thu, 23 Apr 1998 11:00:59 -0400 (EDT)
Subject: POWER LINES / CHASSIS GROUNDS
To: Old Tube Radios <boatanchors@theporch.com>
From: JOHN_SEHRING.parti@ecunet.org (JOHN SEHRING)
Message-ID: <9804231100.aa08434@pcusa01.ecunet.org>

To: boatanchors@theporch.com

For a different take on this, see "Audio Electronics" (used be called
"Audio Amateur") magazine, issue Four:1997 (Vol. 28, No. 4), article titled
"Unleash Your AC Power Line", by yours truly.

Among other things, I talk about why AC power grounds (both equipment &
system) are often not very good grounds. Audio eqipment that deals with
millivolt sigs has a tough time with that. RF equipment, e.g. receiver,
doesn't like it either!

If you can't get the mag, I can email a plain-text copy of the original
manuscript to you.

 -John Sehring (written on Thu, Apr 23, 1998 at Custer, SD) UCC WB2EQG

Date: Thu, 23 Apr 1998 11:26:55 -0400
From: Don <71333.144@compuserve.com>
Subject: Repro Knobs
To: Old Tube Radios <boatanchors@theporch.com>
Message-ID: <199804231129_MC2-3AC8-89D3@compuserve.com>
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit
Content-Type: text/plain; charset=us-ascii
Content-Disposition: inline

Larry Bondonardo who advertises in the business card ads in the back of
every issue of ARC has a fine repro knob business. He has over 500 molds in
stock. He charges 7.50 to make a mold and about $4 a knob. I have used him
several times and have been very pleased. I don't think he handles metal
inserts or skirts though. Anyway, if you need knobs and have one original
that can be used to make a mold, contact Larry because he really does it
right.

No connection...just a satisfied customer.

73, Don

Date: Thu, 23 Apr 1998 11:52:55 -0400 (EDT)
Message-Id: <1.5.4.16.19980422225510.0a5713c8@pop.mindspring.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
To: Old Tube Radios <boatanchors@theporch.com>
From: "David L. Thompson" <thompson@mindspring.com>
Subject: Re: DRAKE R-4* AGC

The question was....
> > The AVC pops a bit on attack, and
> > both releases are too fast, particularly when compared to an R-4.

JOHN_SEHRING said
>>You have the R-4B AGC & product detector ct installed in your R4-A!
>

I had a R-4A that i sent back to Drake twice in 12 years. The first time I was having a problem with the gears in the PTO and Drake installed the R-4B PTO. The second time they midified the AGC and it did pop more than the original. The problem was the AGC would vary unexpectedly.

John is right on...Seems Drake usually put in the newest mods when gear was returned to them for repair or just for factory alignment. They did not ask they just did it! You could count on a quick return and the radio working to specs when you got it...and nasty comments about using off brand tubes (Ken-Rad or Radio Shack)....which they replaced for you!

The only circuit they did not touch was the filters. All pre-R-4C had selectable filters for .5, 1.8, and 2.4Mhz. The R-4C changed to plug in filters (optional cost). The R-4C modified the dial to read analog 1 khz rather than using the dial skirt to read 1 khz while the main dial was 5 or 10 Khz.

BTW: many top 160 meter ops still prefer the Drake line for serious 160 work. Riki 4X4NJ is a prime example.

Dave K4JRB

Date: Thu, 23 Apr 1998 12:20:41 -0400
From: polepeeg@aa4rm.ba-watch.org (BA Marina Electrician)
Message-Id: <199804231620.MAA01340@aa4rm.ba-watch.org>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: AWA DX 'test / twin 69s

I had at it last night with the Stancor 69 et RME 69 with mixed results.

2 lads (W1DX & W1YG) on 20 ~6P (14065). Loaded up & shot quad their way & found antenna 'disconnected.' Cranked 55 footer dn & found gamma connection on 20 broken loose.

Back in to 40 (7030) for a contact, dinner, then some more @ ~8:30P when in comes the packet invasion.

Returned to 40 ~5A for a couple of more including very nice ones with KL2LP & CO7BC. Then comes packet again.

Why do those guys do it? 7030-7080 is theirs & they'll kaplump down anywhere there's a non-digital hole sending out broadcast packets to stow in listening TU/RX/computers' ARP tables. They're saying:

 Hello, I've paid my 10 k-buck amtor ham-job dues, running legal limit,
 call me & I'll send you nudies of Hillary & Sadaam

 Hello, I've paid my 10 k-buck amtor ham-job dues, running legal limit,
 call me & I'll send you nudies of Hillary & Sadaam

 Hello, I've paid my 10 k-buck amtor ham-job dues, running legal limit,
 call me & I'll send you nudies of Hillary & Sadaam

 |
 |
 etc. ad naseum

That'd ruin any kind of non-digital dream.

Any sympathy out there or was I just 'wrong place, wrong time' for the n-th time??

 Marty

Message-Id: <199804231621.RAA06687@punt2.hw.ac.uk>
To: Old Tube Radios <boatanchors@theporch.com>
From: Bill Jarvis <B.H.Jarvis@hw.ac.uk>
CC: boatanchors <boatanchors@theporch.com>
Date: Thr, 23 Apr 1998 18:21:45 +2200
Subject: Re: Getting ZAPPED!!!

If you are getting zapped every time a relay operates, it might be the relay back emf. It should have a reverse diode across its coil to prevent that; but such diodes are frequenctly omitted because the circuit "works" without it...for a while.

============ ===== ===== BILL J. ===== ===== ============
GM8APX, qthr EDINBURGH, SCOTLAND, UK

Quadrupedante putrem sonitu quatit ungula campum

Net-Tamer V 1.10 - Registered

Mime-Version: 1.0
Date: Thu, 23 Apr 1998 08:55:05 -0600
Message-Id: <0009CD14.@mails.imed.com>
From: mack@mails.imed.com (Ray Mack)
Subject: Interesting Tube Info
To: Old Tube Radios <boatanchors@theporch.com>
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit
Content-Description: cc:Mail note part

Hey Y'all:
 I've been away and busy doing other stuff for a while. It's good to be back. The thread on power cords has been most interesting.

 I had the opportunity to read a very interesting article in IEEE Spectrum this month on vacuum tubes. The thing I found most interesting was something most of us already know: tubes can be just as reliable as the sand state stuff. The article was basically about klystrons and other UHF/microwave tubes, but the part about reliability is worth reading. One of the pictures shows a klystron that was removed from service (still functioning mind you) after 240,000 hours of service in Greenland. That's 27 years of all day every day service.

Ray Mack
WD5IFS
mack@mails.imed.com
Friendswood (Houston), TX

From: dma@islandnet.com
Message-Id: <m0ySPRQ-000KugC@mail.islandnet.com>
Date: Thu, 23 Apr 1998 10:02:55 -0700
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Geeez! Don't kill yerself!
Cc: boatanchors@theporch.com
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

At 10:06 PM 4/22/98 -0600, Henry van Cleef wrote:

A lot of good stuff!

To reinforce one point he made: When I built my house, I did the wiring (and most everything else) myself, so became enmeshed in the arcane rituals of "The Code."

Not so very many years back, the house ground was made to both the service ground and to the copper cold water supply, preferably near the water service entrance. This provided useful redundancy. Not so many years before that, the service did not bring in a ground separate from the common, and thus your house system was not grounded. Many older houses are still like this.

Because new houses rarely connect to municipal water with copper (and few houses are plumbed in copper any more, altho mine is) the problem of what the electrical system ground is actually connected to becomes uncertain.

To maintain redundancy, I was required by code to sink two six foot rods into the 'ground', at least six feet apart and bond them to my service box. This actually struck me as kind of silly, because my house is built on a pile of rock rubble, and the chances of the ground working, other than during the monsoon season, is slight to none.

So, my house electrical ground depends totally on a long, long wire that goes away somewhere into the local electricity supply. For all I know, the other end isn't connected to anything.

So, while the electrical ground is good to have, I can't see depending on it.

Maybe the most important point in all of this is that it probably isn't very smart to unthinkingly depend on any one "fix" to keep ourselves from being fried by our hobby. It's easy to become complacent with stuff we work with all the time, and this isn't good!

BTW Henry, GFCI means ground fault condition interrupter - I think! I use them where code requires them, and have one available on my bench. They (to me) are simply one more 'test' to provide a heads-up that something <<may>> be wrong.

Cheers

Jan Skirrow, VE7DJX - still searching for the perfect ground.

Duncan, BC, Canada

http://www.islandnet.com/~dma/Boatanchors/

From: dma@islandnet.com
Message-Id: <m0ySPRH-000KuLC@mail.islandnet.com>
Date: Thu, 23 Apr 1998 09:35:54 -0700
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: REPRO KNOBS -YOUR THOUGHTS PSE
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

If you make 'em, I'll buy 'em.

Somewhere there must be a very large box of old knobs, removed from many, many pieces of comm gear!

I need a complete set for an HQ-129X. Since buying my 129, I've seen several others that have mismatched or non-original knobs. I've replaced the really wrong ones that came with mine with a reasonable match to the original. I'd still like proper repros.

There have been many posts to this list over the years for Hammarlund, Hallicrafters and Heath knobs.

Repros are available for some BC radios (Philco, Zenith, etc.) and there are people (or so I understand) who makes them to order. If enough people wanted a set of one kind of knob, it should be possible to get a reasonable price. Problem is, I don't recall where I saw the info on the repro makers. Maybe someone else can help on this.

Jan Skirrow, VE7DJX
Duncan, BC, Canada

http://www.islandnet.com/~dma/Boatanchors/

Date: Thu, 23 Apr 1998 14:16:21 -0400 (EDT)
Message-Id: <199804231816.OAA15098@smtp13.bellglobal.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
To: Old Tube Radios <boatanchors@theporch.com>
From: Andre Guibert <aguibert@sympatico.ca>
Subject: Re: Grounding

Bonjour to All

Having been zapped more than I remember in industry and my Acres of Boatanchors by all kinds what I came to

classify them as floating grounds and bad groundings.
Had to run a bare stranded no. 8 on my steel shelvings,
bond it at every joints and bring the end at a central
grounding copper plate.
Install 3/8 plywood on the steel shelves.
Bonded every 12/24Vdc radios to the nearest no.8.
Thinking of changing to orange outlets and running a
dedicated isolated ground for the 120Vac outlets.
Using surged/Hopefully transient protected power bars,
Quebec Hydro has removed their lightning arrestors because
2 or 3 persons were injured by falling porcelains from
cheap distribution L/A`s.
Your Benjamin Franklin settled the issue a long while ago
for not changing antenna wires with bare hands.
Andre

Message-Id: <01BD6EC8.897E9210.roy.morgan@nist.gov>
From: "Roy S. Morgan" <roy.morgan@nist.gov>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: RE: Need manuals and info on General Radio 650-A Impedance meter
Date: Thu, 23 Apr 1998 15:00:19 -0400

Here's what I would do:

1) go to the paint store.
2) ask for shellac thinner.
3) use that.

IF the finish is shellac, that is. Which I doubt. (No, I have
not tested any of the GR cabinets at my place yet..) I suspect
that it is lacquer.

If you still need a copy of the manual, e-mail me directly. I
will be copying mine soon.

----Roy Morgan, K1LKY since 1959
Hydrodynamics/Hydroacoustics Technology Center
Naval Surface Warfare Center, Carderock Division
9500 MacArthur Boulevard
West Bethesda, MD 20817-5700
301-227-3827/3855 FAX: 301-227-3884----

-----Original Message-----
From: Owens, Clarence [SMTP:owensc@nebeng.otis.com]
Sent: Thursday, April 23, 1998 10:04 AM
To: Old Tube Radios
Subject: Re: Need manuals and info on General Radio 650-A
Impedance meter

HI,

The last time I saw methanol for sale openly was in Toronto,
...
As far as touching up the cabinets goes, I'd bet methanol would
be a really
good stripper for the shellac ...

Clare Owens N2RJB
owensc@nebeng.otis.com

From: N. West
...
I haven't located any methanol, just ethanol cut with
methanol. Any thoughts on touching up these GR wooden cabinets?

Fred Powell
c/o
ninaw@u.washington.edu

Message-ID: <353FAA37.BFE@digizen.net>
Date: Thu, 23 Apr 1998 13:53:11 -0700
From: Charles Kadesch <chas@digizen.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: REPRO KNOBS -YOUR THOUGHTS PSE
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Mike Souhrada wrote:
> Which knobs are the hardest to find?
> Which ones would satisfy the greatest need??

How about those big, wonderful, spoked tuning knobs used
on the SX-28A?
-73 de Chas W3KC-

From: MNHopkins <MNHopkins@aol.com>

Message-ID: <6c5a4730.353fa42f@aol.com>
Date: Thu, 23 Apr 1998 16:27:25 EDT
To: Old Tube Radios <boatanchors@theporch.com>
Mime-Version: 1.0
Subject: B&K T. Tester info FTGH
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7bit

Some 32 pages of B&K 700 Tube tester update sheets are free to a good home. They are perforated fro finger binder and on paper nearly as thick as cardboard. They date from late '60 to mid '70s and came from a TV repair shop.

Just pay the postage. Conflicts of multiple takers resolved by whim if FCFS fails*

(* I am amused that we accept First come, first served at hamfests but some of us reject it on the Internet.)

73 de ab5L, michael in dallas, student of Tecraft and International (ICM) ham products and mementoes of Six Meters' Golden Age: 1957-58
Michael Hopkins
Box 226841
Dallas, TX 75222 MNHopkins@AOL.com

Message-Id: <3.0.5.16.19980423133643.20f741a4@istar.ca>
Date: Thu, 23 Apr 1998 13:36:43 -0700
To: Old Tube Radios <boatanchors@theporch.com>
From: Ralph Parker <rparker@istar.ca>
Subject: DRAKE R-4* AGC
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

John, WB2EQG wrote: (Tnx for your time, John)

>You have the R-4B AGC & product detector ct installed in your R4-A!
>The AGC & PD are same in -4 & -4A.
So it seems. I must have a late R-4A. My original R-4A manual does agree with the circuit, so it doesn't seem to be a Drake update.

>The PD is also ss but quite different ct. from prior. It has numerous
>problems such as BFO leakage into the end of the IF strip which, among
>other things, modulates the AGC.
My R-4A uses 1N270s as PD. Were later vesions different?

>The AGC action & audio of the -4B is not as smooth as the earlier ones.

I agree.

>But, you should not be getting any pops on attack & slow decay ought to be
>nice & slow. Exactly which caps had extra caps added across them?
C108 (.001) had a .05 across it and C109 (.47) had a .47 across it.

>I wonder which other -4B circuitry you have in your -4A? The -4B also had
>a ss 100 kHz xtal cal with 25 kHz markers. All -4B's had the FET PTO
>rather than bipolar. And Q7 as AF driver.
My R-4A, compared to my R-4 has:
 ss BFO, PD, AVC amp and audio preamp (Q7 and Q8)
 Bipolar PTO (2N706, 2N3858)
 6BA6 xtal calib.
 Better AVC and smoother audio.
I guess what I want is an early R-4A with an R-4C PTO and dial.

Tnx also to Dave, K4JRB, for info re Drake updates I hadn't known.
More to come.
73, Ralph, VE7XF

Message-Id: <199804232052.QAA24329@dewdrop2.mindspring.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Thu, 23 Apr 1998 16:50:52 -0400
To: Old Tube Radios <boatanchors@theporch.com>
From: john <johnmb@mindspring.com>
Subject: Re: Carbons Resistors

Nobody manufactures carbon comps in the 1 and 2 watt sizes
any more... 1/2 watt and below are still available.
Best
/John

Message-Id: <3.0.1.32.19980423231535.006c8858@pop.ctv.es>
Date: Thu, 23 Apr 1998 23:15:35 +0200
To: Old Tube Radios <boatanchors@theporch.com>
From: "JOSE V. GAVILA (EB5AGV/EC5AAU)" <eb5agv@ctv.es>
Subject: Re: Racal RA-117 progress - III
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi Richard and the other List members,

(snipped)
>>...Once fixed, the Collins is, by far, better
>>than the Racal at its present condition. I used also a SS receiver to

>>verify that now the 75S-3B was working fine.

>@@ What do you mean by "far better"? Can you give us an objective set
>of measurements here? Like sensitivity, selectivity, intermod rejection,
>spurious responses - what did you have in mind?

By "far better" I mean something very simple: signals which are a 7+ on the
75S-3B, are barely audible in the Racal. By the way, although the S-meter
could be out of adjustment, the strongest signal I got was less than S-3 in
the Racal. I still don't understand how I got the wrong first impression!.
I was too excited, I think...

>>So yesterday I began to work a bit on the Racal and found a possible
>>culprit: at TP3, with V9 removed, I get only about 1.2Vpp in Mc/s position
>>0 and lots less in any other position. My manual claims for 2Vpp at any
>>Mc/s position!. I changed V10, V8, V6, V4 and V2 with no appreciable
>>difference. TP3 is the output of the 40Mc/s bandpass filter. I know it is
>>not easy to align so I hope the failure is not the filter alignment itself
>>but other component. I'll look at the signal flow up to this point, to find
>>where it gets lost...

>@@ Your post would be far more understandable - and you are more
>likely to get some intelligent help - if you wrote all this *not*
>assuming that we all have the manual in front of us - hi! What function
>does V9 have and where is TP3, for instance? Depending on the frequency
>of the signal at TP3 and the sort of test gear you have, the difference
>between the 1.2V you measure and the 2V that you are supposed to see
>could be just down to measurement error - in other words it may mean
>nothing at all.

Sorry!. Well, V9 is a 6688 tube/valve. In the circuit, it is called the
'second mixer' and it mixes signals from the 40Mc/s bandpass filter and the
37.5Mc/s amplifier. TP3 is just after the V9 tube, so when you remove V9,
you get only the 40Mc/s filter output. You need to have some idea of the
Wadley-loop and mixing scheme of the RA-117 to fully understand all of this.

I said that, in the '0' Mc position, I get 1.2Vpp, BUT in the rest of Mc
positions ('1', '2', ...) I get lots less: only about 0.3Vpp. So something
is really faulty, it is not a measurement trouble. I use a Tek 475, fully
opened (200Mc bandwidth) to view the signal, so it is not a BW related
trouble :-(.

>In my experience filters do not generally become misaligned due to the
>settings changing (unless someone has been twiddling stupidly) - usually
>a component goes off-value or fails completely. Inductors rarely fail
>unless they go open/short, and caps can be taken out and checked on a
>bridge. I would resort to checking the filter parts before, trying complex
>re-alignment procedures.

Yes, I agree with you. But if you see that the filter trimmers have been touched by somebody and get such a poor performance... What will you think?. I got this receiver completely untubed, so there was a chance of it being unworking. Anyway, I enjoy the restoration process. Only trouble in this case is that, if finally the 40Mc/s filter is misaligned, I have not the equipment to align it.

Thanks for your help.

Best regards.

JOSE

 73 EB5AGV / EC5AAU
 JOSE V. GAVILA
 Ausias March 46, 15
 46910 Benetusser - VALENCIA
 SPAIN

 http://www.geocities.com/SiliconValley/6992/
 e-mail: eb5agv@ctv.es & eb5agv@amsat.org

From: gds@digitalexp.com (Reynolds, Jim)
To: Old Tube Radios <boatanchors@theporch.com>
Subject: weird electrical shock and my Elmac af-67
Date: Thu, 23 Apr 1998 16:34:04 -0500
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit
Message-ID: <19980423213133745.AAA168@gds>

Here is one for you all!
Last night I was working CW on 80 meters with my freshly restored Elmac AF-67. I cleaned the bug up and hooked it up and was calling CQ and reached to adjust the bug a bit and got a nice little jolt of about 200 volts DC which was sitting on the terminals of the bug waiting on a contact to close or as in my case, a human conductor.
Strange indeed. Before the reminder of what DC current felt like, signal reports from VE3 land were good.
I have never noticed this sotra voltage across a Key terminal before.
Any thoughts on this?
Jim
KI6UP
Jim Reynolds
PO Box 1692

Wewahitchka, FL 32465
Email: gds@digitalexp.com
KI6UP
Web Page:
http://www.digitalexp.com/~users/gds/

Message-Id: <9804232225.AA03440@netman.ENS.TEK.COM>
To: Old Tube Radios <boatanchors@theporch.com>
Cc: terrybu@netman.ENS.TEK.COM
Subject: GFCI
Date: Thu, 23 Apr 1998 15:25:13 PDT
From: Terry Burge <terrybu@netman.ENS.TEK.COM>

The acronym GFCI stands for Ground-Fault Circuit-Intertupter defined as 'A device intended for protection of personnel that functions to deenergize a circuit or portion thereof within an established period of time when a current to ground exceeds some predetermined value that is less than that required to operate the overcurrent protective device of the supply circuit.' page 17, 1993 NEC handbook.

So in other words it will trip at much less that the circuit breakers rated amperage as I understand it. Having been required to study the code and still in 'aw' of it I'll leave the debating to the so called experts. I still would like to hear a 'clear, concise explanation on how to convert a two-wire boatanchor to a three-wire grounded modern (safe) one without raising the ire of the experts. Until everyone agree on the way to do it I'm going to keep my boatanchors and the ones I sell after rebuilding original.

Terry

Message-Id: <199804232238.XAA09251@punt2.hw.ac.uk>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
From: Bill Jarvis <B.H.Jarvis@hw.ac.uk>
CC: boatanchors <boatanchors@theporch.com>
Date: Sat, 25 Apr 1998 00:39:02 +2200
Subject: Running cathodes cool

> Subject: Re: Running rectifiers cool (using lowered mains)
>
> In my early days I was warned against doing this, esp. with accumulators
> going flat and under-heating the filament.
>

> Seems there was an idea that if you apply HT under such conditions, you
> can physically rip emissive coatings off the filament or cathode.
>
> Sounds feasible to me.
>
> The important thing is, does any evidence exist that such a thing
> actually happens?
>
> Conversely, those "CRT boosters" which over-heat the heaters of failing
> TV tubes: what effects do THEY have?
>
> I'm sending a copy to my friend who used to MAKE valves.
>
He replied:

I think you are right and there is an optimum temp for oxide coated cathodes. The low work function leaves a "gas" of electrons surrounding the cathode which makes a significant difference to the valve characteristics. Running cool must change that to depleted "gas". Could be emmision from inside cathode oxide layer through a greater local potential gradient causes energy dissipation in the layer with perhaps mechanical flaking of the oxide.

I vaguely remember that this was shown to be a real cause of failure but cannot be positive about it.

If boosting worked good luck; it probably gave a short increase in life span like cooking old dry batteries in the oven. The long term solution is a new tube or tele.
==========end of reply from my friend==========

========== ===== ===== BILL J. ===== ===== ==========
GM8APX, qthr Edinburgh, Scotland, UK

Memoria minuitur, nisi eam exerceas

Net-Tamer V 1.10 - Registered

Message-Id: <9804232309.AA03704@netman.ENS.TEK.COM>
To: Old Tube Radios <boatanchors@theporch.com>
Cc: terrybu@netman.ENS.TEK.COM
Subject: R388/51J3 and SanFran
Date: Thu, 23 Apr 1998 16:09:45 PDT
From: Terry Burge <terrybu@netman.ENS.TEK.COM>

Gang,
 That 'Alive' Collins of mine is really quite a decent operating radio. Been trying it out on various shortwave and ham bands and it performs really well even on the higher bands. I've never been one of the 'faithfull' to the idea of Collins being a holy grail or whatever but it is nice to see how rock solid and useful this one is.
 Got most of the smoker's residue (not all) off the radio but cleaning did leave the front panel a bit fadded and spotty in places. Not sure if it is residue from the spray cleaner or the paint is thin. Don't want to push my luck with the front panel and clean it all the way down to bare metal. But just wanted to say how well this old boatanchor works.
 There is one slight problem that seems to be an excess of gain causing it to distort (overload) with the RF Gain set too high even with the AGC on. Clears right up when I back off on the RF Gain. Both AM and CW modes and the AGC appears to be working. Anyone got any ideas.
 I'm moving (have moved) to a new system 'netman.tek.com' but they still got this account open too so anytime I expect it to die here.
 Going down to San Francisco for Tek all next week for a Cisco switch class. Was wondering what places to check out but being how I'll be in class all day Monday thru Friday I doubt I'd get much chance to checkout the local boatanchor haunts.

Terry

From: Jderm740 <Jderm740@aol.com>
Message-ID: <4be2166e.353fca9d@aol.com>
Date: Thu, 23 Apr 1998 19:11:23 EDT
To: Old Tube Radios <boatanchors@theporch.com>
Mime-Version: 1.0
Subject: Power Systems and Personal History
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7bit

Good Day to All
I won't attempt to sermonize about "which way the electron" but I'd like to recount some personal history.
I live in New England one of the oldest parts of this great country. An area that has seen much change since it's founding. It's also seen some strange ideas along the way into the 21st century. I have never lived in a house built since 1942.
To begin. I was born under a hot rock....OOOPS, wrong group. To start over. I was born in a house that was built in the late 1800s and originally had gas lights.
My Grandfather bought the house around WWI and wired the house to replace the gas lights. In those days with electricity the new kid on the block the gas

fixtures were removed and the after-market provided all sorts of converters to replace them.
Service to the house was 110 volt single service. To wire the old fixtures they pulled wires through the old gas pipes useing them as a conduit. And any wire was ok. I can still see my Grandfather testing the hot side by wetting his fingers and seeing which wire gave him the biggest tingle.
In the 1930s the power co's, in an effort to promote 220v systems, began selling stoves and giving a 220 service to the house. Well, now my Grandmother had a modern electric stove but the rest of the house was still 110 and only on one side of the system. The power co. wasn't that generous. You wanted it fixed you paid.
The next house, which my mother and I bought was built in 1912. We bought it 1957 and by that time it had been enlarged and upgraded as per the current law. It wasn't too long before I knew there were electrical problems. Every time I was watching our 21" TV and the furnace started up we now had a 12" picture. It came back but it indicated a problem. I investigated and found 3/4 of the house was on
one side of the service. The next problem was that every now and them, in the winter, we would begin to notice that the house was cool, the fridge was warm and the kitchen clock was two days slow. Guess what, the wire wizard had put the furnace (two motors) and fridge (one motor) on the same fuse. I leave it to you odds makers to calculate that.
My present home was built in 1941-1942 when good electricians were very hard to find. When I went to install a dryer I discovered the grounding cable had been pared down to fit the cable clamp. Was #10, now #14. Neat.
One summer Saturday I came home from a half days work and we had a visitor staying for the weekend. A girlfriend of my wife. She was asleep in the guest room and my wife was in our room. There was an airconditioner running in each. As I climbed the stairs I smelled hot rubber. It didn't come from either bedroom but I finally traced it to a switch box at the top of the stairs. Inside I found some idiot needing a jumper used a piece of zip cord. Both A/Cs were running on that wire.
Now one last bit of history, not personal.
In the 1950s and 60s many new developments in Long Island discovered aluminum wireing and plug and play outlets and switches. Most of you know about these devices but many people don't realize that aluminum is subject to corrosion in disimilar enviorments. Not too much trouble in Pheonix, but near salt air it's deadly.
As time passed the wire corroded and reduced in size and could be severly overloaded and cause fires. Most of those fires came at night when everyone was asleep enjoying their A/Cs. There were many deaths.
Now all I have been talking about were committed by licensed electricians.
DON'T TRUST ANYBODY IF YOU MOVE INTO A HOUSE THAT IS NEW TO YOU.
Now I would like to ask a question. When you use an isolation transformer, do you connect all the items, radio,test equipment etc. on the secondary of the trans or only the radio?

Jack Jderm740@aol.com

End of BOATANCHORS Digest 2026
